

REMARKS

Claims 1-8 are all the claims pending in the application. Applicant thanks the Examiner for indicating that claims 2-4 and 6-8 contain patentable subject matter.

Claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by Sonehara (4,870,484).

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Sonehara (4,870,484) in view of Yamamoto et al. (5,341,231).

Analysis

Claim 1 is directed to a plane light source which includes a light pipe having an upper surface, lower surface and an incidence side surface. A light output means is provided on the upper surface so that light incident on the incidence side surface exits from the lower surface through the light output means while light incident on the lower surface is transmitted through the upper surface.

In the Office Action (numbered paragraph 2), the Examiner interprets the fluorescent tube 7 as the light output means. However, the fluorescent tube 7 is formed on the side surface of the alleged light pipe 8. This is not equivalent to the claimed invention. The light output means of the present invention is formed on the upper surface of the light pipe, as recited in claim 1.

Moreover, the light output means of claim 1 must be interpreted in light of the specification. The light output means of the present invention is clearly a separate entity from

the linear light source 12. Thus, the light output means is clearly not referring to the linear light source 12, but rather to the formation of the upper surface of the light pipe 11.

Further, the alleged the element “9” of Sonehara is not a light output means, but merely denotes light output from the device.

Unlike the prior art, the light output means of the present invention, which is formed on the upper surface of the light pipe, has a function that light incident on the incidence side surface exits from the lower surface, and that light incident on the lower surface is transmitted through the upper surface.

Still further, Sonehara is not directed to a front-light type display device. In Figs. 9B and 9C of Sonehara, dashed lines indicate light transmitting the light guide plate 8 from the lower side to the upper side. The light is scattered and mixed with adjacent light through the light guide plate.

If Sonehara were directed to the front-light type display device, the LCD panel would be provided under the light guide plate. If so, the light from the LCD panel, which should constitute an image, would be scattered and mixed through the light guide plate. As a result, a clear image would be distorted or disappear.

Also, in Sonehara, light transmitting within the light guide plate cannot be output toward the lower side of the light guide plate, since it is reflected upward by the indented bottom of the light guide plate.

Thus, Sonehara’s guide plate cannot be served in the front-light type display device.

Applicant notes that originally filed claim 1 recited “information light is transmitted and made visible through the upper surface of said light pipe”. In other words, an image formed under the light pipe (with LCD panel) is visibly transmitted through the upper surface of the light pipe so as to be served in a front-light type device. This “information light” is discussed at page 20, line 6, for example. Sonehara does not teach visibly transmitting the image under the light guide plate through the upper surface.

Claim 1 is amended to include this original wording of the “information light”. Since this phrase was included in the originally filed claim, it is believed that such a change does not require further search or consideration. Thus, entry of this change is respectfully requested.

In view of the foregoing, claim 1 is patentable.

Claim 5 is patentable for at least the same reasons as claim 1, by virtue of its dependency therefrom.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Appln. No. 09/695,306

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PATENT TRADEMARK OFFICE

Date: March 20, 2003

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Ellen R. Smith', written over a horizontal line.

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